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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,215	09/06/2000	Yasumasa Nakajima	Q60744	9292

7590 06/21/2004

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EXAMINER	
TILLERY, RASHAWN N	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/656,215	NAKAJIMA ET AL.	
	Examiner	Art Unit	
	Rashawn N Tillery	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4,5,7*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's election without traverse of claims 1-4 in Paper No. 9 is acknowledged.

However, upon reconsideration, the Examiner has elected to withdraw the restriction requirement dated April 7, 2004 and accept claims 1-8 for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Bhaskaran et al (US6064764).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Bhaskaran discloses, in figure 6, a digital camera comprising:

an image pickup portion (21) which converts image data;

a producing device (Bhaskaran teaches computing a watermark by applying a digital signature algorithm and the secret key; see col. 4, lines 10-17 and col. 5, lines 43-46) which produces characteristic data (watermark data) from the image data;

a secret key-recording portion (inherent feature) which records a secret key to be used for encrypting data so that encrypted data can be decrypted by a public key;

an encrypting device (Bhaskaran teaches a watermark insertion procedure; see col. 5, line 47 to col. 6, line 17) which encrypts the characteristic data with the secret key;

an embedding device (Bhaskaran teaches embedding a visual watermark in the frequency domain; see col. 7, lines 25-35) which embeds encrypted characteristic data into the image data;

a recording medium (26) which records the image data having the characteristic data embedded therein; and

a transmitting device (Bhaskaran teaches transmitting stored software for the watermarking techniques; see col. 8, lines 44-65) which transmits the secret key from an external medium.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being obvious over Bhaskaran et al in view of Houser et al (US5606609).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See

MPEP § 706.02(l)(1) and § 706.02(l)(2). The Examiner notes that the prior art reference has a patent date prior to the filing date of the present invention which also qualifies it under 102 (a).

Regarding claim 2, Bhaskaran discloses, in figure 6, a digital camera comprising:

an image pickup portion (21) which converts light from an object to be photographed, into image data;

a producing device (Bhaskaran teaches computing a watermark by applying a digital signature algorithm and the secret key; see col. 4, lines 10-17 and col. 5, lines 43-46) which produces characteristic data (watermark data) from the image data;

a secret key-recording portion (inherent feature) which records a secret key to be used for encrypting data so that encrypted data can be decrypted by a public key;

an encrypting device (Bhaskaran teaches a watermark insertion procedure; see col. 5, line 47 to col. 6, line 17) which encrypts the characteristic data with the secret key;

an embedding device (Bhaskaran teaches embedding a visual watermark in the frequency domain; see col. 7, lines 25-35) which embeds encrypted characteristic data into the image data;

a recording medium (26) which records the image data having the characteristic data embedded therein.

Bhaskaran does not expressly disclose that the secret keys are recorded as a hidden attribute. Houser teaches an electronic document verification system. In one embodiment the system allows a user to create private and public keys. Houser reveals

that it is well known in the art to secretly store key pairs in a location selected by the user (see col. 9, lines 36-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Houser's teachings in an effort to prevent unauthorized users from altering image data.

Regarding claim 5, Bhaskaran discloses, in figure 4, an image falsification detection system using a digital camera which comprises an image pickup portion (21); a first producing device (Bhaskaran teaches computing a watermark by applying a digital signature algorithm and the secret key; see col. 4, lines 10-17 and col. 5, lines 43-46) which produces first characteristic data (watermark data) from the image data; a secret key-recording portion (Bhaskaran inherent feature) which records a secret key to be used for encrypting data so that encrypted data can be decrypted by a public key; an encrypting device (Bhaskaran teaches a watermark insertion procedure; see col. 5, line 47 to col. 6, line 17) which encrypts the first characteristic data with the secret key; an embedding device (Bhaskaran teaches embedding a visual watermark in the frequency domain; see col. 7, lines 25-35) which embeds encrypted first characteristic data into the image data; and a recording medium (26) which records the image data having the first characteristic data embedded therein.

Bhaskaran teaches a method of tamper detection where it is verified using a public key whether an extracted watermark is a valid signature of the hash. The system outputs a response indicating whether or not an image has a watermark. Bhaskaran does not expressly disclose separately producing the original image and the

characteristic data from the original image. Houser discloses an electronic document verification system, in figure 8, having an

an inputting device (embedded security object) which inputs the image data;

a removing device (810) which removes the encrypted first characteristic data;

a decrypting device (3) which decrypts the encrypted first characteristic data;

a second producing device (840) which produces second characteristic data from the image data from which the encrypted first characteristic data have been removed (see col. 16, line 52 to col. 17, line 31); and

a comparing device (831) which compares the decrypted first characteristic data with the second characteristic data.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Houser's verification system since it provides an added measure of security by affording the user the option of viewing separately the watermarked data.

Regarding claim 7, Bhaskaran discloses a transmitting device which transmits the secret key from an external recording medium (Bhaskaran teaches transmitting stored software for the watermarking techniques; see col. 44-65).

Regarding claim 8, Bhaskaran inherently stores a secret key since secret keys are specific to a given device. Bhaskaran does not expressly disclose that the secret keys are recorded as a hidden attribute. Houser teaches user created private and public keys. Houser also reveals that it is well known in the art to store public and private keys in separate locations (see col. 9, lines 36-60). It would have been obvious

to one of ordinary skill in the art at the time the invention was made to implement Houser's teachings in an effort to prevent unauthorized users from altering image data.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being obvious over Bhaskaran et al in view of Chapman et al (US6216228).

Bhaskaran teaches a method of tamper detection where it is verified using a public key whether an extracted watermark is a valid signature of the hash. The system outputs a response indicating whether or not an image has a watermark. Bhaskaran also discloses that there are a variety of one-way hash functions and signature and verification algorithm pairs known in the art. See col. 6, lines 59-67. Bhaskaran does not expressly disclose selecting a volume of data from a plurality of data volumes for encrypting data.

Chapman teaches a system for rating video programs for all television broadcasters. In one embodiment of the invention a plurality of watermarking algorithms are stored in a memory. The algorithms generate different patterns of a watermark for each classification code (rating). Each still image of the video program has a watermarked classification code embedded within it. See col. 6, lines 20-57; col. 7, lines 30-54; col. 8, lines 37-65; and col. 10, lines 49-67.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bhaskaran's device by implementing Chapman's teachings in an effort to provide adequate safeguards by selectively applying algorithms in accordance with the image data.

Claim 6 is rejected under 35 U.S.C. 103(a) as being obvious over Bhaskaran et al in view of Houser et al in further view of Chapman et al.

Regarding claim 6, Bhaskaran discloses that there are a variety of one-way hash functions and signature and verification algorithm pairs known in the art. Houser teaches an electronic document verification system. In one embodiment the system allows a user to create private and public keys. Neither Bhaskaran nor Houser explicitly disclose the recording device records a plurality of public keys corresponding to a plurality of secret keys. Chapman teaches in one embodiment of the invention a plurality of watermarking algorithms stored in a memory. In an alternative embodiment Chapman discloses a plurality of decoder keys for extracting a particular watermarked code. See col. 10, line 49 to col. 11, line 12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bhaskaran's device by implementing Chapman's teachings in an effort to provide adequate safeguards by selectively applying algorithms in accordance with the image data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RNT

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